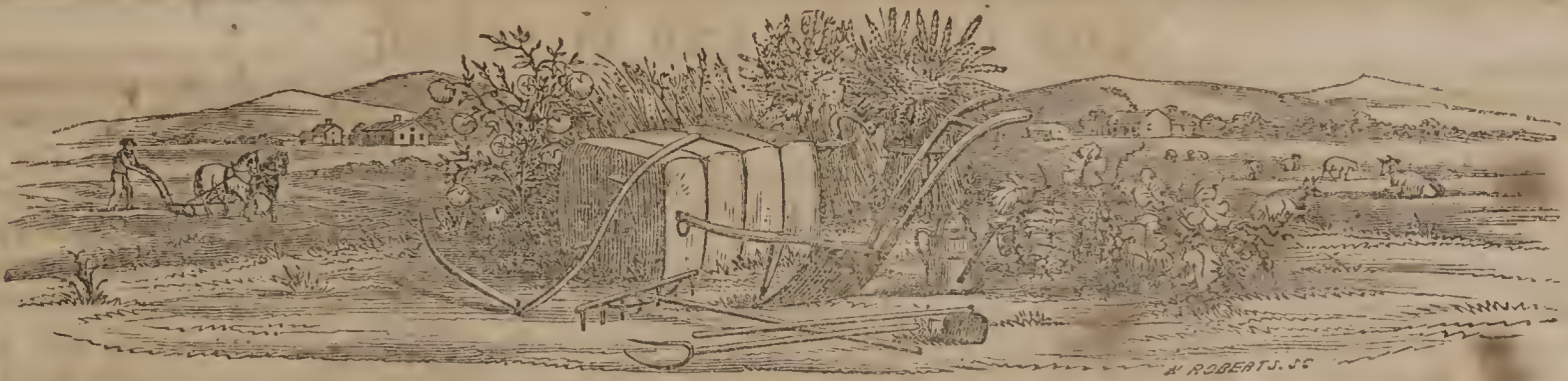


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FARMER AND PLANTER.

DEVOTED TO AGRICULTURE, HORTICULTURE, MECHANICS, DOMESTIC AND RURAL ECONOMY.

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Cotton and its Prospects.

American and Foreign Product; Demand and Supply of the World; India Cotton and Competition; Future Prospects, &c
(CONTINUED FROM PAGE 163.)

IN a Senator's speech in 1842, we find the following: "While we have heretofore scarcely noticed the existence of that immense country (East India) which would secure to us a home market, where we might be allowed to trade on either our domestic calculations or our commercial calculations, all at once we find one of our great staples being supplanted in England, and in great danger of being driven from our home markets by its producers." (See Mr. Smith's speech, U. S. Senate, 1842.) Unless we sink down into stupidity and ignorance, the day is past when such miserable cant is to have any control over us. If we are but true to ourselves, we can command the future, so far as our prosperity is concerned. England is in such a condition, that she must have our cotton.—She has \$180,000,000 capital vested, and 225,000 persons immediately and actually devoted to the manufacture of cotton as laborers, and 700,000 more dependant upon these factories, and all depending

on the raw material from the United States. Great Britain consumes and manufactures 425,000,000 lbs. annually, and the value of her cotton manufactures is estimated at 200,000,000 a year. Her commercial prosperity and credit depend upon this article. In fact it may be said that her great Bank depends upon it, and with it her funded debt itself, and with these, her peace and present civil polity. Withdraw cotton from England; and it would produce a convulsion that would shake all her institutions. Any man can see this from all her movements. She has subjugated all India to extend her commerce and manufactures. She desolated China, and spread havoc amongst a peaceful people by the thunder of her cannon, for the avowed purpose of forcing them to admit opium and eat it, but in reality to penetrate that mighty empire with her trade and manufactures.

By her treaty with China, and her monopoly and power over India, she now commands the great increasing markets for manufactured cottons over the world. These, with her concentrated banking power and commercial credits, give her a great advantage over all other people. It is idle to suppose that she can ever depend upon India for cotton. The length of voyage, freight and insurance alone, would forbid it. The freight on cotton from the United States to Europe, will scarcely ever exceed one cent per pound, and the voyage will not average more than four weeks. Whereas, from Calcutta, Madras, or Bombay, it can never average less than a penny per pound, or near two cents, and the voyage will average four months. The whole expenses of cotton from the United States to Liverpool, and sold there, do not exceed three cents per pound; while from India

the expenses are not less than six cents. The cotton, from inferiority, is about 2 cents under ours in price. Suppose "fair cotton" commands in Liverpool 12 cents, ours will, according to the above calculations, yield 9 cents nett—while the India cotton will yield only 4 cents nett, and a fall in price of one per cent. would make it much less in proportion as the expenses would be stationary.

As to the superior cheapness of Hindoo labor, that appears only on paper. For one well fed slave with us, managed by the intelligence of our planters, will do more effectual work than five uncertain Hindoos, with their poor diet and still poorer skill—independent of the extreme vicissitudes of their parching climate.

But there is one thing that will forever prevent India from being permanently a great producer of cotton for a certain supply.

The East India Company is the most stupendous monopoly in the civilized world, and all British India is held in possession by this company. It is a fixed principle with them never to sell a foot of land in fee simple, and they only part with it on limited leases, even to the native population themselves. One half of all that the native population produces is claimed by the East India Company as "land tax;" whether it be indigo, rice, sugar, cotton or opium. This is felt as the heaviest and most grinding exaction, and particularly as to rice, which is so essential to their support. In 1840 it was estimated that 500,000 persons perished in India from starvation and its attendant diseases. Their population is too dense to raise cotton, when food is so essential. If there falls only 11 inches of rain in any year in India, their rice crop falls off, and they have inevitably to encounter famine

in its most frightful excess. There can be no calculation made as to the permanent production of cotton to any increasing extent where despotism is so exacting and unlimited as is the case with the East India Company in regard to India—and where the food is so scarce and the vicissitudes of the seasons make famine so frequent. The protracted and difficult culture of cotton requires a free government, where those who own labor and capital shall be protected in its free enjoyment. Capital is delicate and sensitive, and will not be invested except where law is fixed, and freedom is a thing beyond the control of government. It takes \$100,000,000 of capital in this country to produce annually a little over 200,000 bags of cotton, and here intelligence and enterprise have reached their highest efforts. In India, with their uncertain climate and ill-regulated labor, it would require more than that amount to produce the same. And in such a country and under such a government, with such uncertain labor, no set of men of any sagacity will invest \$100,000,000 of capital in any such enterprise. The importations of cotton from India into England are now actually falling off. In 1837 England imported from India fifty one millions of pounds of cotton, and in 1838 only thirty-four millions—while she imported the same year from the United States three hundred and nineteen millions. In 1849 she imported from India only 32 millions. In 1844 we raised a little more than 800,000,000 lbs., and of that 660,000,000 went to Europe. And there is still a large portion of the population of Europe who do not use cotton, but consume entire hemp, flax, and wool.

The population of China may be put down at 252,866,000, and the British possessions in Asia at 121,680,000. These together would make 374,546,000. Allow them only two pounds per head, and it would amount to 749,092,000 lbs. of raw cotton—and this at 370 lbs. per bag, which is the East India bale, and it would be about 2,002,600 bales. Put the present growth and consumption of India and China at 600,000 bales, and the exports to all Europe 152,175 bales—and it would then leave a deficiency of 1,250,425 bags in those countries, assuming only two lbs. raw cotton per head. But as civilization and trade expand in those thickly populated regions, particularly in China, under the British, French, and United States Treaties, formed within the last

few years with that immense Empire, we may safely calculate that they will finally consume at least as much as the Turks now do, which is estimated at three lbs. per head. This rate of consumption in India and China, would produce a demand in those countries alone for one thousand one hundred and twenty-three millions, six hundred and thirty-eight thousand pounds, or near 300,000 bales at 400 lbs.—which is 600,000 more than the crop of the United States. We will at once perceive the deep interest Great Britain has in controlling those countries. They are at present the great outlets for increased manufactures of cotton, and it is the interest and control she has there, which has for two years, enabled her to purchase cotton at the enhanced prices, and do a good business, while the American manufactures may be depressed.

Wherever the British or American trade reaches, there the consumption of cotton will be extended. The Caucasian, and of it the Gallic and Anglo-Saxon races, are the conquering and subjugating races of the world; and it may be said that, wherever the banners of European arms or Christian religion are unfurled, there will spring up markets for the rapid consumption of cotton.

By the blessing of Heaven we are enabled to raise the most beneficent product that commerce has ever transported for the comfort of the human family, a product destined to make a new era in the intercourse of nations, and to develop new sources of civilization. And to the *slave-holding* states of the Union it is the great source of their power and their wealth, and their main security for their peculiar institutions. It is that which gives us our energy and enterprise under a hot climate and enables us to command the respect of foreign powers. The Egyptian laves in the Nile and worships it, as the source of his wealth and support.—The Hindoo bows with superstitious reverence before the Lotus, under an idea that Visha created Brahma from its unfolded flower. And let us teach our children to hold the cotton plant in one hand, and a sword in the other, ever ready to defend it as the source of commercial power abroad, and through that, of *Independence at home*.

The great difficulty is among ourselves. It is not over production, or foreign competition, that we have to dread, but the denial of equal rights in the Union, that endangers us. It is the assertion of the right to fetter and restrict us absolutely

forever within our present boundaries, that we are called upon to resist. The insulting assumption that the cotton growing states are not good enough to share with the free and pious North in the benefits and rights of the Confederacy, is an outrage and stigma, and if we bear it in peace, we shall cover our children with deep degradation.—*De Bow's Review*.

A COTTON PLANTER.

Edgefield District, S. C.

Memorandum from Plantation Book
for the Est. of Edgefield C. H.

YEAR	1st Cotton bloom	wheat cut	first killing frost
1843,	24th June,	7th June	15th Oct.
1844,	9th "	2nd "	3d Nov.
1845,	6th "	1st "	10th "
1846,	18th "	9th "	19th "
1847,	18th "	8th "	20th "
1848,	17th "	5th "	2nd "
1849,	17th "	4th "	10th "
1850,	23d "	1st "	13th "
1851,	18th "	14th "	24th Oct.

The wheat is the large red bearded wheat. The little white May wheat is always cut in the neighborhood about 20th May, and often before.

I see in your memorandum of first frosts in Pendleton, published in the Nov. number of your paper, that at the time of these frosts it is stated that the thermometer was at 30° and 31° invariably; and in 1834, 12th of October, the thermometer was at 26°. Surely it does not mean to infer that the mercury must fall to 30° or 31° for frost—this would bring black frost. Here, if it is damp at all, it will be a white frost at 41° and 42°, and 43° a slight frost—and I never knew the thermometer at 30° or 31° as early as is stated in your paper. Did they use a thermometer with spirits of wine?—How is this?

A FARMER.

REMARKS.—In the absence of him, who made the memorandum referred to, we venture to express the opinion that he by no means intended to convey the idea that the thermometer must fall to 30° or 31° for frost. The design, we understood, was only to indicate the *degree* of temperature, and *not the point of congelation*. What instrument was used we do not know, but as register thermometers are not in very general use, we presume it was the *common mercurial* thermometer by Fahrenheit.

Water may remain in a liquid state at 31° Fah. or even several degrees lower, but the instant it is agitated ice is formed. It cannot, however, be solidified above 32° under any known circumstances. Whenever it is said frost has been formed, the thermometer standing higher than 32° Fah., it can simply mean that frost was in one place and the thermometer in another of a higher temperature.

Whatever may be the temperature of the surrounding medium, the space occupied by the frost must be as low as 32°. From the radiating properties of plants their temperature is often reduced lower than the air around them, and thus frost may be formed when the thermometer, indicating the temperature of the adjacent air, stands as high or higher than 40°. In this sense frost may be formed above 32°, but it should not be understood that water will solidify in the form of ice or frost above 32° Fahr. We are much pleased with the interesting notes from the memorandum book of "A FARMER," and hope he will favor us with more.—EDS.

Review of the November Number.

MESSRS. EDITORS:—We have just received the Nov. Number of your journal, and for fear of getting deeper in debt than we care to be, will take a brief notice of its contents at once:

ESSAY ON MANURES.—Very good—we must hammer away upon this subject, whether people like it or not. It has come to this point—we must set about a systematic improvement of our lands, or draw our stakes and cry "Westward, Ho!" And then it is only postponing the matter, for every body is going the same road to ruin. Manure is money—a penny saved is a penny earned. There is truth in science and its application to the commonest concerns of life: but before you can convince the farmer of this, you must induce him to read, to think for himself, to ask himself the why and the wherefore of this—once get him to thinking, and if two ideas can combine in his head without battling their brains out, why you may rest assured of good results. There are 29,969 Farmers in South Carolina—how many of them take an Agricultural paper? Here is an Agricultural journal published at one dollar, languishing for want of support—a support denied to it by the very class too, for whom it *exclusively* labors.—One sixth of the Farmers and Planters of South Carolina by their simple dollar subscription could place upon a firm footing, enable the Editors to enlarge and embellish its pages, and command the best agricultural talents of the South. We will be plodding always in the dark by such a course. The "Genessee Farmer," of New York, has a circulation of 50,000—while the Albany Cultivator, the American Agriculturist, and that best of all agricultural journals the "Working Farmer," all have a very large circulation in New York. The effect is making itself more and more manifest every day at the North. Shall it be said that a State whose Agricultural exports exceed 8,000,000 cannot support one little Agricultural journal?

"HEWERS OF WOOD AND DRAWERS OF WATER."—Late Beginner is right. We must make more corn and less cotton, and reform in divers other things. But my dear fellow it is all humbug to talk about Agricultural conventions doing any good while there is so much lamentable ignorance and prejudice in the world. If any measure should be presented to the consideration of the Legislature to-morrow for the benefit of Agriculture, and irresistible argument brought

forth in its favor—two thirds of the *back-country* Farmers in that body would oppose it. Why? because it would cost something; and Tom Spriggins or Joe Bunker, who never paid in their lives a dime for taxes, would rail against it. When the Farmer and Planter is patronised and read as extensively in South Carolina, as the Cultivator and Soil of the South are, and deserve to be, in Georgia, then you may expect fruits from an Agricultural convention in lieu of blossoms. "Colo" has given us too capital articles—every word true and to the point. We must "change our policy," else improvement is but adding fuel to the flame. We entreat him to lay it on hard, for he is dealing with an alligator skinned set.

"FRUIT."—Very good—but we cannot join our friend in his condemnation of grapes. We have always considered a good grape the most wholesome of summer fruits. They have never hurt us and we have tried them fully. It is one of the easiest fruits propagated, and there are varieties adapted to every soil and climate nearly on the Globe.

"CHOICE OF MULES."—Doubtless there is good sense in this. Most persons seem to think a mule's a mule for a' that.

"RICE CROP WITHOUT A SPEAR OF GRASS." Blessed are they who can command water enough to kill grass. We would have been thankful for even enough to make grass grow during the last summer. "Waccamaw" must be a famous potato country—300 to 500 bushels per acre—there's potash there, eh?

"REMARKS ON BREEDING."—It is worse than folly to introduce improved breeds of animals without improved treatment. A cross of the eern crib (pretty strong too), is all that will keep them up. By crossing on the best native stock, careful selection, with an *end in view*, and good treatment, we may after a time succeed—but it takes time, patience, and no ordinary skill, to effect it. "That's a thrifty little cow, stranger—does she milk well?" "Yes." "How much a day?" "Four or five gallons, sir." "Was her mother a good milker?" "Yes." "And her grand mother?" "Yes—good as piggin ever set under." That is my idea of a pedigree, sirs.

"PLOWS AND PLOWING."—In this department we certainly need light. The miserable work generally passed off under the name of plowing, we should begin to do away with. The subject cannot be too much studied.

"INDIAN CORN."—"A Subscriber" has given us a sensible matter-of-fact "scratch"—we hope it may not be the last from his pen—it has a steel point and runs deep.

The "Veteran Farmer and Planter" has covered the whole ground. It is a pungent, sensible, unanswerable document—but you had as well sing psalms to a dead donkey as to talk to the cotton Planter about reform, or keeping his tongue in his mouth. Some people would burst or publish the *first* bloom or send the *first* bale to market.

FRUIT TREES, SOILS, &c.—There are some excellent hints in this extract from Mr. Affleck's Almanack, of which every man should have one—if he could get it.

"BOOK FARMING AND ITS VALUE."—Capital.

"The Old Farmer" here talks to some purpose—if the farmers could be induced to read and study such things we might hope for better days soon. Ashes!! ashes a manure? Why, my dear sir, I know some ash-heaps by the way-side, that have been leaching there for twenty-four years, and the potato patch on the other side of the road won't grow anything but strings.

BROOMSEDGE.

Big Branch, Nov., 1851.

The above should have appeared in our last number, but the paper having been *made up* when it was received, we were compelled to postpone it.—EDS.

Barley.

In order to elicit more information than we are able to give our friend P. M. E., we took the liberty of publishing his letter of enquiry on the subject of barley, in our last number, and take pleasure now in giving him through the same medium our experience, limited though it be, in its culture, &c.

We have sown barley for several years, principally for the valuable pasturage it affords in the winter and spring, for calves and sheep. For that object our practice has been to sow manured lots (cow-penned are preferable), taking stock off of such as we desire to raise seed from, or to cut for early horse feed, by or before the first of April. The grain further than was necessary for sowing has not been an object with us, as we have found the "humming process" (depriving it of its awns) very troublesome, after threshing with flails, only. The last year we commenced cutting for our horses, as soon as the head made its appearance, and continued to feed on it till and after the crop was fully ripe. In feeding to horses it requires much care and attention, however, and with all that can be bestowed on it, we must confess that, nothing but a great scarcity of other food will induce us to use it in future, for cut it as you may, when fed dry the beard collects in wads between the lips and gums, and under the tongue, and from irritation excoriate the parts where lodged; and unless the mouth is examined daily and cleansed out, it becomes so sore that the horse will refuse his food altogether. This bad effect may in some degree be prevented by cutting and mixing the food with a little meal, after sprinkling it with water, and packing it down in a box the day before it is fed. This process in some degree softens the beard, and, even without the meal, renders it in every way a better food. Yet it requires some attention to prevent injury to the mouth. We have never fed barley to hogs in any way, but are not of the opinion that either it or rye will injure them. In the article referred to by our correspondent, which we published in our 8th number, it is said, "But be careful to keep other stock from the pasture after the barley begins to get dry, as the long beard will make the mouth sore and also lodge in the throat and produce a bad cough. This does not occur with the hog he masticates the dry beards with impunity. It may be understood, then, that dry barley before it is threshed out, does not an-

swer for the horse or cow. But after the heads are well beaten and brokeff with the flail, so that the mouth and throat will not sustain injury by the beards, a bushel of barley is said to be superior to the same amount of corn for any kind of stock."

It is said when barley is threshed in a machine, especially when very dry, most of the beards are broken off. This will save much time and trouble in cleaning it, as is usually done, by beating with the sharp edge or end of a paddle on the barn floor, or in a barrel.

For grazing, barley should be sown, not less than two bushels to the acre, as early as the month of October, in our latitude. We have made a fair grain crop, however, sown as late as January—and not grazed. We would refer our correspondent to the following article on the different varieties, culture, &c., of barley, taken from the "Genesee Farmer:"

"The increasing attention which is paid to the culture of barley—the profits of the crop—its value as a preparative for wheat—and the favor which it finds as a substitute for wheat in making bread, is entitling it to a high rank among the grains cultivated in this country.

According to Loudon, there are six species and sub-species of this grain in cultivation, besides varieties:

Hordeum Vulgare, or Spring barley, is distinguished by its double row of beards or awns, standing erect, and its thin husk which renders it favorable for malting. This is the sort commonly grown in the northern and eastern districts of both England and Scotland.

Hordeum Cæleste, or Siberian barley, is a variety of early or spring barley, much grown in the north of Europe, having broader leaves, and reckoned more productive than the other.

Hordeum hexastichon, Winter barley, or as it is called in Scotland, square barley, is a variety known by having six rows of grains, large and thick skinned, and for that reason not considered so favorable for malting.

Barley bigg, is a variety of winter, known by its always having six rows of grains, by the grains being small and thick skinned, and being earlier than the preceeding or parent variety. It is hardy and chiefly grown in Scotland.

Hordeum distichon, common or long eared barley, is known by its long spike or ear flatted transversely, and its long awns. It yields well, though some object to it because the ears being long and heavy, they think it apt to lodge.

Hordeum distichon nudum, or naked barley, is known by the awns falling easily, and when ripe almost of themselves from the chaff, when the ear

somewhat resembles wheat, and by some is called wheat barley. It is spoken highly of in the British Husbandry, as being hardy in growth, strong in the stem, tillering with great vigor, and producing abundant crops of fine grain.—By some this variety is considered the same as spelt wheat, which indeed it strongly resembles. It is six rowed.

Hordeum Zeocriton, sprat or battledore barley, is known by its low stature, coarse straw, short broad ears, and long awns. It is but little cultivated.

New varieties of barley are produced in the same manner as in wheat by crossing, and some of the most celebrated kinds, such as the Chevalier, Annat, &c. have originated in this way.

In this country but two varieties are sown, and these are familiarly distinguished as the two and the six rowed.—They are always sown in the spring; no kind in the United States being able to endure the severity of our winters, or at least we know of no variety that has been attempted here as a winter or fall sown grain. The comparative value of the two varieties does not seem to have been fully decided by our farmers, some preferring one kind and some the other.—That the two rowed will make the most flour from a given number of pounds—that its thin skin renders it more suitable for malting—and that it is rather less liable to be effected by smut than the six rowed seems to be generally conceded; but its productiveness is much disputed, and it would seem with some reason, as the greater length of ear in the two rowed would hardly compensate for the greater number of rows in the other variety.—So far as we are able to judge, however, from the opinions of experienced farmers, the preference, for the reasons assigned, is becoming more decided in favor of the two rowed.

Barley of every variety requires a rich, friable, and mellow soil, which retains a moderate quantity of moisture, but without approaching to that which may be denominated wet; as for instance land which contains from 50 to 65 per cent. of sand, and the remainder chiefly clay, though in situations where the climate is usually moist during the summer, it may be grown where sand is in the soil in a larger proportion. It succeeds best in what farmers term a rich deep loam, and with too much sand, or too much clay, will produce good crops. With the single exception, that it will succeed with less lime than wheat, soils that will pro-

good wheat will also grow barley to advantage.

It is probable that more barley is grown in the state of New-York than all the rest of the United States, and the section in which it is produced in the greatest abundance and perfection is the northern slope of Western New York. The ranges of towns which mark the geological separation of the argillaceous and limestone districts have hitherto yielded the greatest quantities of barley, and in them the culture is still rapidly extending. On this slope it is found that soils on which winter wheat without extra care in cultivation, is very liable to freeze out in the spring, will produce heavy crops of barley, and hence clover and barley on many farms have taken the place of clover and wheat, affording about the same profit in the crop and at a less expense of labor.

Perhaps there is no crop which demands and repays a thorough working of the soil better than barley. The surface when fitted for the reception of the seed can hardly be made too fine; and the excellence of the crop is greatly depending on this point. A crop that occupies the ground so short a time as barley, spring wheat or oats, can hardly be benefitted by manure applied directly to them, unless in a thoroughly decomposed state and hence it has been found by experience, that these crops succeed better after hoed or root crops to which the manure has been applied, or on turf lands that have received a top dressing of manure, and been carefully turned over in the fall of the year. The practice, somewhat exclusively followed, of sowing winter wheat after barley, has led to the application of the manure to the barley crop; and perhaps where hoed crops can not precede this is the preferable way, though there is a great risk of too much straw, and the consequent lodging of the barley before ripening.

Barley should be sown in all cases as soon as the ground is sufficiently dried and warmed to allow the seed to germinate freely, and place them beyond all danger of injury from frost. Early frosts are more fatal to barley than to spring wheat or oats, and more injurious on wet or low lands than on dry or elevated ones. Particular attention must be paid to the dryness of the soil at the time of sowing, especially if naturally inclining to wet, as on such soils a wet spring will starve and destroy the plants. "Steeping the seed twenty-four hours in soft water will cause them to germinate at the same time, and this, if it is sown at a late

period, is of more importance than may be generally imagined, as it is otherwise apt to ripen unequally." (Brit. Hus.) The finest, heaviest samples of all grains are usually obtained from early sown fields; and the difference in weight in barley and oats is from one-fifth to one-third in favor of early sowing. The smut is the only disease to which barley is subject, and this is rarely a serious injury where the crop is grown on favorable soils, or the seed is put in in good order. The worm which has proved so destructive to wheat in the eastern counties, has also injured the barley in a considerable degree; but in West New York we have neither seen nor heard of its appearance in this grain. The wire worm is sometimes very destructive to this crop when young, and in some seasons the meadow mole, so called, when the grain approaches maturity, makes sad havoc by cutting down the plant to get at the ears, an effect more often observed when the barley is sown on turfleys, as they will rarely lie so close as not to leave numberless hiding places to the animal.

In sowing barley, as in most other crops, the universal experience of English farmers and the directions of the best works on agriculture, go to establish the fact, that less seed are required on rich land than on poor, and that the quantity of seed should be increased in proportion to the lateness of the sowing. In European countries from ten to eighteen pecks are used, sixteen being the quantity usually recommended; in this country two or three bushels is considered sufficient for the acre. The two rowed requires less than the six rowed, as it tillers more vigorously; and if sown too thick, the plants will be weak and ripen irregularly.

Both the quantity and quality of the product depend on the soil, and the variety of the seed sown. In this country the average crop may be stated at from thirty to thirty-five bushels per acre; in England the average produce is estimated at thirty-two bushels. Middleton says, the crop in that country varies from fifteen to seventy-five bushels an acre.—The greatest crop we have seen mentioned in this country was sixty-five bushels per acre, and that was grown on land from which several crops had been taken in succession. In an experiment made by the East Lothian Agricultural Society upon the Chevalier, and a common sort of barley, both sown on a light gravelly soil, the produce for each imperial acre, was—Chevalier 65 bushels 2 pecks of grain, weighing 56½ lbs. per bushel.—Common barley gave 61 bushels 2 pecks of grain, and weighed 54½ lbs. per bushel.

The value of the several kinds of grain as an article of food, may be estimated from the following table. The quality of the flour being good household or family flour:

	Weight of grain,	of flour,	of bread.
Wheat.....	60	48	64
Rye.....	54	42	56
Barley.....	48	37½	50
Oats.....	40	22½	30

[Brit. Hus.]

The analysis of barley by Sir H. Davy,

gives as contained in 100 parts:

79 per cent of mucilage or starch,
7 of saccharine matter,
6 of gluten or albumen.

Owing to the deficiency of this latter substance, barley flour, like that of oats, buckwheat or potatoes, cannot be made into bread alone, but is mixed with wheat flour, or eaten in the form of cakes, when it is very wholesome and palatable.

Barley is perhaps one of the most difficult of grains to secure in good condition: as, if suffered to stand until the berry is perfectly dry and hard, the head will frequently drop down, owing to the brittleness of the straw;—and if cut too early the grain will shrink and lose in weight; and as it cannot, when cut in an unripe state, be put into barns or stacks without certain injury by heating, so in unfavorable weather, it is very apt to become of a black color, and lose the clear yellowish-white tinge so characteristic of good and well cured barley.—The usually fine state of our atmosphere, and the clear dry air of our summers, renders the proper curing of barley a much less difficult task here, than in the moist climate and cloudy skies of Great Britain.

Before the introduction of threshing machines, barley, though easily threshed by horses or by hand, was with difficulty prepared for market, owing to the obstacles offered in separating the awn from the kernel; and at the present time in many districts of England and most parts of the continent, the *hummelling*, or freeing the berry from the beard, is one of the most laborious and difficult processes in the culture of barley.

Barley is extensively used in the fattening of pork, for which purpose it is admirably adapted when prepared by steaming or grinding; and in the districts where it is grown, is an excellent substitute for the corn crop, which for a few years past has been a partial failure. It is also used in large quantities in our breweries, and in two many instances takes the place of rye in the manufacture of whiskey. As a feed for horses, it is not generally approved, but for fattening cattle, hogs and poultry, it is highly prized. Before the system of cutting straw, or manger-feeding was generally adopted in Great Britain, barley straw, owing perhaps to its being cut early, was used as food for cattle in preference to others, as cattle could eat it uncut more readily than the harder straws. Wheat or oat straw is now preferred when it is to be converted into chaff, or cut fine for mixing with hay or roots. There are varieties of barley found in the shops, Pearl and Scotch, both of which are prepared by divesting the kernel of its husk in mills resembling somewhat the rice mills of the south, and in the case of the pearl barley the grinding or rubbing is continued until the berry assumes a smooth round form. Few articles are more nutritious, or better adapted to the stomachs of the weak or the valetudinarian.

Salt.

A subscriber asks, "What is the use

of salt; why not discontinue it to stock?" This question is not new, either theoretically or practically. It is not necessary to go into any extended discussion of the subject since we apprehend that two simple facts ought to decide it, were there no others, which is not the case. These facts are that salt is a constituent of the blood of men and of animals. This would show that there must be a constant and universal demand for it in the system, from some quarter; and though it might be elaborated from its elements taken in some other form, in cases of necessity, yet it admits of no doubt that the simpler and easier mode of supplying it is that commonly practiced. The other fact is that the taste for it among men and animals is universal, or so nearly so that all cases to the contrary are mere exceptions. This is a fact which ought not to be slighted. Animals do not universally take to eating that which is poisonous or useless to them. Nature is a pretty sure guide to those who from necessity are obliged to depend upon her directions. Thus the *a priori* reasons are for its use, and so conclusive are they to us that we should as soon think of debating whether it would not be as well to dispense with use of water.

But there is at this time a good deal of investigation in process among medical men into the diseases of the West—how far they may be owing to deficiency of salt in the system. A late Medical Journal, published in this city, gives several cases of cure of different forms of disease by the use of salt. The diseases alluded to are dysentery, typhoid and intermittant fevers. Some of them were remedied permanently by salt alone, and others associated with other curatives. The known use of salt as a curative operating upon the blood is in perfecting and preserving its globules, which in many forms of disease are disintegrated. It would indeed seem to deserve investigation, whether the dreaded scourge which creeps along our rivers annually, the cholera, may not be of the nature of diseases for which the use of this article may be found either a preventive or in some degree a remedy.

If salt may be used as a curative agent for our Western diseases it would be indicated that its proper use would prevent many of them. We believe it is a fact that such diseases among cattle as bloody murrain, quarter ail, etc., are known to be prevented extensively by a free use of salt. Our advice—if it is proper that we give it—is that salt be supplied to all farm stock plentifully and constantly; and that it be used sufficiently in the house, and especially in the food of children.—*Prairie Farmer*.

CORN MEAL PUDDING—Beat until very light, seven table-spoon fulls of sugar and the yolk of six eggs; cut the whites to a froth and stir them in, and sift in five table-spoonfuls of meal; mix it and bake quick. To be eaten with wine sauce.

ONE hole in a fence will cost ten times as much as it will to fix it at once.

Cultivation of Indian Corn.

MESSRS. EDITORS;—The Laurensville Herald, received by me some time since, contains an article from "Sylvester," with your remarks. It is the first I have noticed of it. I would not assume the position of a teacher, but that it has been forced upon me. Living very retired, seldom visiting my nearest neighbors—having a library of from 12 to 1500 volumes, receiving some 30 periodicals (many being very kindly sent me gratuitously,) embracing religion, agriculture, politics, science, &c., &c., together with my home interests—all these combine to make me probably too much so—rather on the order of a hermit. I am called from my privacy by many such kind letters as your several favors, and I pray your readers will bear with my seeming design to be forward. If I am egotistical, which all self-depending men are, more or less, I hope it will be for the good of the mass, thus when showing off my great profundity, beauty, and elegance, that a little impetus may be given on the side of virtue, industry, good management and the welfare of our race. The remarks of Sylvester are just such as I have heard and read for years. I have met them in my field, at my fireside and at those of others, and in print too—I say not successfully, for could I say as one of yore—"Veni, vidi, vici," (I came, I saw, I conquered) then would have Sylvester been answered. Permit me now to show a part of my experiments in corn, and to remark, if any man has striven to learn his trade with the honest desire to be free from all bias, I hope I have been one. In 1841 or '42 I had a piece of corn plowed once each and every week—abating only when the land was too wet. That corn retained its color even after the shuck was whitish yellow, indicating maturity of plant.—My land was put in good condition before planting, plowed full six inches—land level—growth, oak, hickory and dogwood—only ordinary land, clay near the surface—in culture since 1828.

Now to the matter in hand. As far as I can know of Mr. Crawford's plan, I pronounce it perfect as to culture—with the exception, stir the earth every two weeks until the corn be in tassel, after that let it be. But the corn may be cultivated perfect and yet the yield be light. And why? In the first place there may not be the nutriment needed by the plant or the kernel. The season may be so dry that the spongioles cannot take up the nutriment, though in abundance. The

land may be so saturated with water that the plant may suffer by excess of stagnant water and want of air in the earth. The land may not have been well broken up—there being unbroken ridges all through it. There may not be sufficient depth to the tilled soil to admit the roots pasture enough. I have, I think, given objections enough, and yet there are more, either a bad variety of corn, or seed injured.

If land be placed in good tilth, I care not whether the land be creek bottoms or high ridges, should ever prefer flat culture, no ridges. I invariably flush all my land for corn, thus endeavoring to avoid ridges covered by the plow, and unbroken, I then run off rows with a shovel plow—use a turn plow to break up with, always, thus (only way too) the better avoiding those unbroken ridges or ribs through the field. I never cultivate with a turn plow—using harrows, sweeps, cultivators, shovels or double shovels.

If land is wet, I plow not. I prefer my hands to be catching doodles, than plowing land that will not crumble after the plow, if thus by rain. I keep my plows going, no odds how dry. I have now about as good corn as I ever made, yet not a season at any time to wet the land three inches since March (this 28th July.) Any day since I began to work corn I could plow up dry earth. This is no theory of mine. I have no love for the practice on the score of its being my offspring. But I adhere to it, it being the result of experience derived from a thorough trial before I dared adopt it. If it is science—all the better. If an old man's notion—so it be true I care not.—All I ask is, try one acre, and try it as you would desire to prove truth, not to prove the recommender a liar, nor to foist your own theories and practices. The writer of this has already passed the age his father reached, and his mother during the life of said father gave birth to eleven children, and one other in three and a half months after, thus he cannot be with you long—his name will soon pass from earth—he covets neither honors or wealth but desires to be useful, that his beloved country may be recipient of all he has picked up during life.

Your reply was enough, yet I have thought I could not do better than thus to come to your aid, in showing to my brethren that there is one who has thus cultivated on an average (for ten years,) over one hundred acres of corn. I have been too wordy, but I trust in the indulgence of your readers. I have purpose-

ly avoided theory. I used to think that unless a thing was reasonable, philosophic, it was useless. But I see much, that God or man, the first will not and the second cannot gainsay, which is true, and yet philosophy, common sense, &c., &c. never reached.

Many of my friends have ceased cultivating cotton—"no use, the land is clean, no rain since I plowed," &c. but I am plowing cotton, and have regularly worked every two weeks. I do not see any disadvantage, at least—the outcome can only show, and to the general result I appeal. With good will towards all men, I am yours,

COLO.

July 29, 1851.

Indian Corn.

(Continued from page 173.)

THE importance and value of Indian corn are too well known to every practical agriculturist to need illustration. Upon this part of our subject we will dwell but briefly, on every part of the globe where the hand of civilization has broken the turf, this beautiful grain receives a large share of attention. In the western continent it is raised from Canada to Patagonia, and the islands of the South Sea, through almost every variety of climate and people, and over an extent from north to south of more than seven thousand miles. It was introduced into Africa by the Portuguese in the sixteenth century, and is cultivated more or less from the Mediterranean Sea and the Libyan Desert to the Cape of Good Hope. In Java and the Asiatic isles it forms an important product. In central Asia, it is known and valued, as well as in Australia and the Indian Ocean. In Europe it is extensively produced, in Hungary, in Lombardy, in France and Spain, and we might almost say from the Ural chain to the Atlantic. No grain could secure such favor from all parts of the world, except from its intrinsic value. No other grain, in fact, except rice, is so extensively cultivated.

Its flexibility of organization makes it very easy of adaptation to climate and soil. Though it prefers moist and rich soils with strong heats, there are varieties of it which can be raised in tropical climes at a height of more than nine thousand feet above the level of the sea. The warmest regions of the torrid zone produce maize in abundance, where three crops can be taken in a season, while the short summers of Canada have a variety adapted to them. This cannot be said of rice, which requires great heats, and

cannot endure a climate of high latitude. It is proper here to notice briefly the mere important varieties of Indian corn. There is one common in Hungary, which M. Parmentier endeavored to introduce into France. It ripens in two months. A still more remarkable kind is mentioned by Oriedo as being cultivated on the shores of the South Sea, which ripens in less than forty days. There are to be found in Spain alone, no less than one hundred and thirty varieties. The varieties most common and valued here, are the large yellow, the red, which differs from it only in color, the sweet corn, and what is, perhaps, the most important, the Canada corn, known best in Maine and Canada, from its early ripening. Its yield is thought to be equal to the larger varieties. Seventy-five bushels of it to the acre, have been raised at Nahant, as exposed a place, doubtless, as any in the country. The Egyptian corn has been preferred by some, while Cobbett's has the preference with others. These varieties have been tried together, in the same field, and the Egyptian found to be the earliest and the Quarantine, or Cobbett's, next. There is also a variety called Valparaiso,—sometimes, also, called Oregon corn, which, when roasted, splits in the form of a cross. A species called Tunicate, is found in Paraguay and in some parts of Oregon. Each kernel is covered with a glume, or husk. Owing to the difficulty of separating the grains from the glumes it is of little value. The *Zea caragua* is a corn found in Chili, said to be hardy and long lived. Nuttall describes a variety called the early Mandan corn, cultivated by the aborigines about the Missouri. Other varieties might be described, but it is sufficient to say they probably all sprung from the common yellow, and that they differ from each other only in color, form and size of the grains, and in the time of maturity.

Indian corn ripens at a time when most other grains have been harvested. It therefore gives employment when there would naturally be but little else to do. But what gives to Indian corn its great importance, is the actual amount of nutritive matter which it contains.—It is said to be third in this respect, wheat and rice containing a somewhat greater amount, though many place maize second only to wheat. We have the analysis of Indian corn, which may be given as follows:

Silica,..... 38.45
Potassa,..... 19.51

Phos. of lime,.....	17.17
Phos. of magnesia,.....	13.83
Phos. of Potassa,.....	2.24
Carbonate of lime,.....	2.50
Carb. of Magnesia.....	2.16
Sulph. of lime and magnesia	79
Silica, mechanically found..	1.70
Alumina and loss,.....	1.65—100
making in all one hundred parts. In other words, we may say, on the authority of Dr. Dana, of Lowell, there are in it of	
Fat forming principles, gums,	
&c.,.....	88.43
Flesh forming principles, gluten, &c.....	1.26
Water.....	9
Salts*.....	1.31—100

A glance will show how greatly the fat forming principles predominate in the one hundred parts. There is hardly any grain which yields so much for the support of animal life. The difficulties and contingencies of raising wheat in the eastern parts of Massachusetts have discouraged its cultivation, so that we may say that Indian corn is by far the most profitable crop, especially, as, when the soil is properly managed, there is no grain which restores so much to the ground. It is a fact, too, that it may be cultivated longer in succession than any other grain; and if kept dry it may be preserved for an indefinite period without injury. The ease and rapidity with which it recovers from a drought is truly remarkable. Many predicted during the last summer that the corn crop would be destroyed. The leaves were badly curled, and there was every indication that the crop would greatly suffer. Every one remembers how speedy was its recovery, and how rapid its growth after the change of weather. As a fattener for cattle, swine and poultry, we may say that Indian corn is unrivalled in utility. The analysis of Dr. Dana, as given above, is sufficient to show, at once, how important it is for such purposes. As a food for man it is extensively used, though by some thought to be too stimulating.

The most common way of cultivating,

*The following is an analysis of Indian corn, at two different stages, by J. H. Salisbury:

TABLE 20.	TABLE 21—Corn ripe.
Carbonic acid..Trace.	Carbonic acid..Trace
Silicic acid..... 0.900	Silicic acid..... .850
Phos. acid with a little per ox. iron 41.830	Phos. acid with a little per ox. iron 49.210
Lime..... 0.075	Lime..... 0.075
Magnesia..... 12.420	Magnesia..... 17.600
Potash..... 28.405	Potash..... 23.175
Soda..... 11.840	Soda..... 3.605
Sodium..... 0.345	Sodium..... 0.160

is to plant in hills about four feet apart. But our impression is, that where the largest crops have been obtained, the seed have been sown in rows or drills.—In either case, it is now pretty well settled among farmers that it should not be hilled, as was the custom a few years since. There seems to be several reasons for this. If the earth is drawn up around the stalk at the last hoeing, it sends out new roots, which divert much of the nourishment which would otherwise have gone into the stalk and the ear. It is not unfrequently the case that *aerial* roots, even, are emitted from the lower joints of the stem above ground, and descending, fix themselves in the soil. This takes place on a much larger scale, if these joints are surrounded with earth. If the earth is taken from the immediate spaces, so as to leave hollows, the long branching roots become exposed to the sun, and cause the plants to feel the drought too severely. Kelp, which washes up in winrows upon the sea-shore, has been found to be of valuable assistance to maize. It should be equally spread over the ground and plowed in.

But it was not our design to allude to the modes of production. Every practical farmer is already familiar with these from experience, to say nothing of the easy access to our well conducted agricultural journals, which keep up with every improvement in all departments of husbandry. If we have succeeded in throwing some light and interest over this grain our aims are accomplished.

In conclusion, we would say, that if America has furnished the Old World with maize, the potato, tobacco, cocoa, vanilla, and other plants useful to man, she is herself indebted to the eastern continent for wheat, barley, oats and rice, for the coffee plant, now one of her staple products, for oranges, lemons, peaches, and many other plants which now grow in great luxuriance both in the tropics and in our temperate climes. These plants Europe had been receiving for more than twenty centuries, from the Greeks and Romans, and from the nations of the east, till they had accumulated in rich profusion on her western shores. Now many of them with many of our own, are borne on to the islands of the South Sea, still further west, whither the restless march of civilization is tending. The natural gifts of one country to another, facilitated by commerce and the arts, are fast binding together the remotest corners of the globe.—*Trans. N. Y. Ag'l. Society.*



SHORT HORN BULL, SPLENDOR.

Short horn Bull Splendor.

THE Short horn bull, Splendor (calved Sept., 1827, bred by Mr. Thos. Weddle, dam Beauty, sire Charles C. H. B. (1,816), both imported by Mr. Weddle), is an animal of great constitution and many good points. The above cut is a fair outline, but of course cannot show his great width of hind quarter. His coat and handling are first rate, having that soft, velvety

feel, which is so desirable in all short horns. He is of a remarkably mild and gentle temper, yet still retains all the fire and vigor of youth, and weighs, in very moderate condition, two thousand two hundred pounds. Splendor has without doubt, served more common cows than any bull in the state. He invariably stamps upon his get his many good qualities (often superior in general appear-

ance). His steers are good workers, and his cows choice milkers, both in quantity and quality. He has been kept most of his life in Livingston County, N. Y.

JOHN R. PAGE.

Sennet, Cayuga Co., New York.

The above was taken from the American Agriculturist. For the cut we are indebted to A. B. Allen & Co., New York.—Eps.

Fair of the South Carolina Institute.

MESSRS. EDITORS:—The third annual Fair of the South Carolina Institute has commenced. The deposits already made, and the promise of more, exhibits a deep interest in, and appreciation of, such exhibitions. The great London Fair has demonstrated that such enterprises are remunerating, when skilfully and liberally conducted; and the mind must be skeptical indeed, that doubts that science and art must receive a propulsion commensurate with almighty steam, when thus brought to the investigation of the practical man, and the gifted sons of genius. Fairs are immemorially honored receptacles of English, and other European manufacturing skill. Hence their perfection as displayed at the late monster concentration in the Crystal Palace. In the early history of South Carolina, there were several legally established Fairs, which must have conducted to the convenience and thriftiness of our early settlers. But with the produc-

tion of bulkier articles for market, and increased facilities for transportation by water and land, and the more thorough development of capabilities of well selected sites for towns, they fell into desuetude, and are only now resumed as the depositories of skilful and useful inventions, and rare and beautiful arts.—Our city, like her sisters, experiences a progressive impulse, and an enterprising company is ready to stimulate and direct the energy. The Hall selected now, and at each preceding exhibition, is the Military Hall, erected by the militia of the city, and constructed on the plan, and under the direction of one of our most gifted architects. Externally, it is a grand and imposing structure, surmounted by turrets. The entrance is through a Gothic archway, which passed, a broad and handsome stairway on either hand, lead to the Hall, above, the largest in the city, which furnishes an elegant area for the display of the ingenious and beautiful works now decorating it, while

the ground floor affords the most fitting chambers for machinery, and all that is more substantial.

The exhibition now before the public presents a variety shop, with temptations rising from matches (let not your young readers mistake my meaning) up to coaches and steam engines, and the betweens are an omnium gatherum of all that is rare and beautiful, to almost all that is useful and necessary. The paintings are the first attractions on entering, and if I dared presume myself a connoisseur, I would name several pictures, as well as too, said to be the productions of sisters, a Madonna and Fanny—supposed by us to be a copy of the Cenci.—By the same delicate hands two common conchs were converted into cameras, that were (we use the universal language in saying) wonderfully beautiful. But we dislike to betray our ignorance, and so pass on to sculpture, of which we know nothing. But Powers' Eve is so beautiful in seeming ignorance—so perfect in

symmetry so apparently unconscious of sinning, that criticism is abashed, and gazes in mute admiration. Certain it is the sculptors felicitous conception has made one of her great-grand-sons forgive her transgressions.

From these beautiful arts, you move among the utilitarian. The fabrics of many looms present themselves tastefully arrayed, and provoke comparison with neighboring styles (admissible in offspring of the loom). Yeast, also, is offered for the leavening of bread—ink for writing, and candy for the children. Then the bootee for beauty's ankle: and the boot for the manly foot. Harness for the staid horse; and saddles for the impatient steed. Soda water if you are thirsty—a shower bath if you are not wary. Arm chairs of silk; and arm chairs of straw. Mattresses with springs; and mattresses hydrostatic. Coverlids, gorgeous with the hues of the prism; and coverlids white as snow. Hats that would ornament any head; and hat measures that accommodate themselves to bumps natural and artificial. Culinary extracts, colognes, and *other* strong waters must close our enumeration, for, in a word, the variety is endless, and each article almost perfect in its kind—the catalogue must gratify any further curiosity.

Among the articles appertaining more particularly to your craft, I must mention Butterfield & Skinner's Patent Cotton Planter; which opens the furrow, deposits the seed, and covers it well. And, it is said, will do its work as thoroughly in the field as in the lot in the city—Price \$15. Also, a boring machine, for auger boring; rapid and true in execution, and in our opinion a great acquisition.

Wilson's Hand Loom, from Anderson, is a fine specimen of machinery, and appears to weave with an ease, exactitude and rapidity, that places it above anything of the kind we have seen. If you have not, we hope you will examine it.

A Labor Saving Press, by McComb, (Tennessee) may be well recommended to cotton planters and hay pressers.—Also, a Plantation Saw-Mill, which appeared to us much simplified and improved. Chapman's horse shoes took our fancy—and we think we know something of horses and all connected with them.

A Circular Straw Cutter, by Brown, where the stock to feed is large, is the thing wanted.

The specimens of Barley, Rye, and Wheat, were uncommonly fine. The

Black French Barley we never saw before—the grain is large. The White Cape Wheat, and Mammoth White Rye, each from Green Co., Georgia, are equal to any we ever saw.

A Steam Engine, from Gindrat & Co., in Montgomery, Ala., is universally admired, being of very high finish. And Mr. Lebby's Engine for flooding or draining lands, cannot fail to recommend itself to any one requiring its aid. I send a catalogue—should you desire information of articles in it, I shall take pleasure in aiding you.

The exhibition this year has not equalled its predecessors. Probably many articles were sent to London, that otherwise would have graced our Hall. A misunderstanding, also, diminished the show of carriages. Some we examined were superb that did not lend their lustre to the show. May such an occurrence never again check the ardor of friends to the Institute, and introduce bickerings where all ought to be harmony. The company attracted is large, unusually so from the country, and presents, as a large collection of people must always do, a fine panorama of life; in which the homely and the exquisitely beautiful (and we beheld such), age and youth, wit and dullness, the informed and the ignorant display their characteristics. A good likeness of a hideous negro, in wood, was taken, I won't say whether by cockney or rustic, for Powers' Greek Slave; and an elegant Buffet of native oak, by Bulkley, for a cooking stove. But I wish you now to accompany me to Hatch's Hall, in Hassel street, which was selected, I presume, from its central position, not the adaptedness of the name, as the receptacle for the feathered convention; and let me inform you that in no convention with which I am acquainted, were there louder, more threatening, or more boastful appeals than in that at Hatch's. But the people regulated these delegates, and the end has been useful and instructive, as the exhibition was novel and pleasing. The chicken mania (not the pip) has sprung upon us incontinently. Little was known of the improved breeds of poultry and the masses were content with the dunghill chanticleer and pullet, to within a short period. A few, however, that exercise their eyes, ears and understandings, and like to tickle their palates, have taught us that there are varieties as distinguished for size and flavor, as some were known to be for pugnacity. Hence recent costly importations of poultry, and

an exhibition by a company, got up as if by steam, that would do credit to any metropolis, the great Babylon not excepted. The spontaneity of this association and exhibition, are highly creditable to the liberality, taste and energy, of the contributors, and is another specification of the charge of awakened zeal and enlightened improvement south.

On entering the Hall, we went to the right-about, and found ourselves in company with the Games—and beautiful specimens were they. Dr. Phin's Irish Game was our favorite, but we think it doubtful if Pat would not have met his match had he been pitted with Miller's and some others of his compeers. Not designing a fight, however, we hurried on, and were soon in a labyrinth of Chinese geography. Cohn China, Shanghai, Brama, Pootra, Malay and Chittagong, Europeanized with Poland, Bucks County, Bremen, Penguin, and Bantam birds, displayed their peculiarities and excellencies. The chief contributors to this feathered assemblage are, Mr. H. Wilson, Mr. Michel, Mr. Gefkin, Dr. Couturier, Mr. C. H. Stevens, Dr. Hayne, Dr. Furman, Mr. Williams, and others, doubtless, equally worthy of chronicling. The fowls sent by these gentlemen, surpassed in size and beauty, any thing we had seen or expected to see, and are magnificent specimens of the Order Gallina—These mammoths are very prolific, and with little care soon become climatized, and sell readily at from five to twenty-five dollars each. I shall not attempt a statement of weight or height, but from inspection believe the reports of the papers respecting each. It must puzzle any committee to award premiums to the competitors for the Chinese varieties; though if commencing to breed, we should prefer Mr. Gefkin's Black Shanghai cocks, and some of Dr. Furmans and Mr. Williams' hens. Nevertheless, many, and perhaps better judges, have other preferences. Among 400 reported on exhibition, you may well imagine that opinions and tastes will be conflicting. Mr. Couturier's China Geese, and Dr. Ramsay's Indian Mountain and Chinese, if as savory on the table as they are beautiful in life, ought to drive the common goose from the farm yard. Mr. Bickley's Penguin ducks infected us with quackery; and Dr. Ramsays Penguin and Muscovy Mongrels, would rouse an alderman to another effort at deglutition, after turtle and venison. A pair of Poland top-knot fowls by Mr. Volmer, were very attrac-

tive, and are reputed hardy and prolific. Change now your visionary focus, and out with the microscope, and view the Bantans—perfect in form, varied and exquisite in plumage, brave as Cæcars and gallant to beaux sex—as bravery always is. Real specimens of the *little* beautiful, and exhibiting a consciousness, we thought (how rare), that they were cynosures of admiration.

Pheasants, Golden and Silver, from Mr. T. B. Lucas, displayed their gorgeous beauty, and would have alone attracted a crowd. Parrots close the list.

Of necessity we avoid prolixity (tho' you may think us too long), knowing that your matter must be suited to all appetites, and that your larder is always full. In conclusion then, as better men often say, we are advocates of the Institute, and hope you will aid in sustaining it, and of the improved Gallinaceans, and earnestly and honestly recommend them; and trust, that if your male readers choose to be Rip Van Winkle like on this subject, the ladies of your vicinage (to whom we most respectfully bow), will insist on having specimens of these elegant and useful varieties. E. H.

Charleston, S. C., Dec., 1851.

Peas and Pea-Hay.

As to a choice of varieties, we think it depends very much on the object for which they are grown. If the object is to feed negroes, we prefer either what is called the Crowder, the most prolific of all kinds and mild to the taste, or the white pea, of medium size, with a black eye, which is also a good bearer, and quite mild when cooked.

For cows, if the pea is to be gathered, we again prefer first, the Crowder, and next the large, pale-yellow, called the Cow-pea, from its excellent qualities for milch cows. But if the pea is to be left on the ground for stock of all descriptions, especially when they are to be exposed for any considerable time to the weather, we decidedly prefer first, the black, and next the red, or "Tory." It is said the black pea will not injure stock of any kind; and if the deleterious effects are as some suppose owing to a chemical change they undergo in sprouting, or to the decomposed state in which they are when taken in the stomach, we believe they would be less apt to produce bad effects than any other variety. As from their peculiar quality they will lie in the ground throughout the winter, without imbibing the least particle of

moisture, apparently. For the table, we use only what is called by some the lady, by others the gentleman pea; very small in size and white. If the object is vine, either for the improvement of the land or for hay, we are not aware that there is much difference, provided they are planted at distances according to the size of pea. The larger varieties will yield more vine than the small, but the vine is usually coarse and more difficult to cure.—The quantity of vine, however, depends much on the time of planting. Early planting, the seasons being equal, will usually produce more peas—the late more vine.

Time of Planting, &c.—This should be done at the first or second working of the corn, and in the centre of the space between the hills, and on the ridge. Peas never should be planted in the hill with the corn. We have seen much injury done the corn by this mode of planting. Nor do we like planting between the drills (in alternate rows with the corn), because in plowing, the finishing furrow is left open too near the corn. In other words, the bed on which the corn stands, is left too narrow. Light sandy lands may be safely planted much earlier than such as are stiff and cold. If the object is the improvement of the land, they should be planted alone. Nor should they be planted with corn, if the object is to obtain the greatest amount of corn the land is capable of yielding, for we are fully persuaded that even under the most favorable circumstances of late planting, and not in the hill with the corn, they do it much more injury than is by most persons supposed.

Gathering and curing the Vine.—The ripening of the first pods indicates the proper time for cutting the vines. If cut earlier the yield is less; if cut at a later period, the vine becomes woody and less nutritious, besides producing sometimes fatal effects on horses by lodging in the intestines. In this vicinage a farmer, a few years since, lost two fine horses from feeding on tough pea vine without cutting them up. On a post mortem examination he found pieces of partially masticated vine a foot long hanging in the folds of the intestines. These, from irritation, produced inflammation, mortification and death. The pea vine should never be pulled up. It is unpleasant enough to be under the necessity of robbing the land of its ameliorating effects even by cutting off—much worse to pull and deprive it of not only the vine, but

the root also. Our practice is, with sharpe hoes to strike off the vine at or near the surface of the ground, without disturbing it otherwise, and there to let it lie one or two days, according to the weather, then to take up, pile, and, as we never gather very much, because we do not like to impoverish the land, haul directly to the barn, or other shelters, under which it is secured in an open state, until cured enough to pack-away. We cannot agree with our friends of the Conversational Club in their preferences of the pole over the rail pen mode of curing. If, as Mr. A. says, it is the most "economical," it is in our opinion economy only of labor. It is more convenient and more easily accomplished no doubt—but there the economy ends. The article thus cured may, as some say of badly made hay, "*spend better*," but that is saying but little in its favor. If the weather is favorable, and the stack removed early to the barn, the food secured in this way is usually good—but under other circumstances, it is anything else. A stack of pea vine made ever so well, unless capped by a better material for turning water than itself, offers but little resistance to the beating rains, and after being exposed, has more the appearance of a stack of charred sticks than of well cured hay. Nor do we think that some, we have seen, would be regarded by a horse or cow as a "perfect nose-gay." The making of rail pens is attended with more labor and inconvenience at the time, especially in large fields, but when once made and properly filled (putting in a few rails every two or three feet) it will contain as much as fifteen or twenty six feet stacks, and after being covered with either straw or boards, all is secured till it may suit the farmer's convenience to remove it.—Cut the vines after the dew is off, and in this way they may be put up on the same day, and on opening, will be found as bright and sweet as the best made Northern hay.

Feeding.—Having invariably made other provisions for fodder, we have not much experience in feeding pea vine to horses, we nevertheless know that when cut at the proper time and well cured, they are equal to the best clover hay. We have fed most that we have saved to our milch cows, calves, and work-oxen. The pea vine should never be fed to any animal especially a horse, for the reason already stated, without first cutting them short. It affords us much more pleasure, howev-

er, to feed them to mother earth, from which they sprung, either as a mess of green salad, or in their maturer and cooked state, after having passed through the digester of the genus lecs.

Notwithstanding the great value of the vine in fodder, and the pea as food for stock, we regard it as *most* valuable for improving exhausted soils. It will grow where almost everything else will fail. Land must first be made rich before it will produce clover, but a pine barren will bring quite a luxuriant growth of vine, and be benefitted by the crop. It is said of the late William Lowndes, that he became so impressed with the value of the cow-pea, as a fertilizer, he took in special charge an experiment on poor lands near Charleston. The first year he gathered seven bushels of oats to the acre. Immediately after cutting, he sowed the field in peas, and in the autumn plowed them under. The next year he gathered fourteen bushels of oats. Again, as before, he sowed the pea and plowed in the vine, and the following season took from the land twenty-eight bushels of oats. A third time he sowed and turned under the vine, and the succeeding harvest cut forty bushels to the acre.

Our experience has not been quite as specific and systematic as this—but it has been not less convincing. As an improving crop for worn-out lands, in our judgment, the pea has no rival. If the peas are sown broad-cast—which practice we do not approve—we think a suggestion of B. H. Burgwin, which we published in volume first, as worth a trial, particularly on good land. He says: "As it is important to give the peas a start over the weeds and grass, I soak them six hours in water, and rub them in plaster of Paris; and, when they begin to leaf and branch, say, when twelve inches high, I sow plaster at the rate of a bushel per acre. This stimulates their growth, and they overpower the weeds and grass."

Carbon.

MESSRS. EDITORS—On burning coal-kilns the air is carefully excluded, to prevent the oxygen of the air from combining with the carbon of the wood. If the air was allowed freely to enter while the kiln was burning, nearly the whole of the carbon would combine with the oxygen of the air, and escape in the form of carbonic gas; (a portion does escape in the form of carbonated hydrogen gas) and the whole mass of wood would be reduced to ashes—the ashes being but one per cent of the original wood, and probably but the half of this existing in the form of carbonates.—(Carbonate of potash, &c.) At the base

of the kiln, a hole is kept open to admit air enough to keep up a sufficient heat to dry the wood—not to burn it, but to expel all the water out of it. In the kiln-drying of planks, the heat may be so increased as to char the whole of it. I have thought in the burning of brick, the carbon that escaped from the wood while burning, had a good deal to do with the hardening of the brick; not only was the moisture dried out, but the carbon in being diffused through the kiln, acted as a solidifying agent. For here too the air is, to some extent, excluded to prevent, probably, the escape of the carbon, as well as to confine the heat. I know not enough of the matter to say that this is really the case: but we know carbon is necessary to the hardening of iron—(in making steel.)—to the solidifying of bones, teeth, shells, wood, (petrified) &c.; and that pure carbon—the diamond, is the hardest substance in the material world. In the petrifying of wood, the carbon of the wood combines with the lime of the water, with which the wood is saturated. Some clay soils, I am told, will not make good brick—but with the addition of a little lime, the hardness of the brick is very much improved. In the beginning of this article, we noticed in the making of coal how necessary it was to exclude the air, in order to preserve the carbon—and how rapidly it would have escaped in the open air. This will lead us to notice the effect of the burning of woods, and the large amount of carbon that is there destroyed, or dissipated into the atmosphere—an amount the trees and plants had been accumulating for several years, and all consumed in a few hours—an element, as we shall see, that enters largely into the composition of plants, and absolutely necessary to their growth, and as much of it as possible should be returned to the soil. It will also lead us to consider the effect of turning under green crops in order to exclude the air, while their decay and decomposition are going on. (The decay of vegetables is compared to a slow combustion.) As heat promotes the oxidation of carbon, shade, as immaterial and unsubstantial as it is, may and does perform an important part in the improvement of soils, and gives us a very good reason for covering our manure-pens and piles: also, for stirring our lands as little as possible, during the hot months. In a former article some hints were given with regard to the formation of the soil: that it was the combined result of a vegetable-chemical action of the atmosphere and the sub-soil—the original surface of the earth;—or, in other words, that it was the result of a vegetable principle, combining the elements of the two—producing vegetable organic matter; and among the elements therein alluded to, we shall see that carbon is one of the most important, as well as the most abundant in the formation (the structure and growth) of plants.

COLD WATER.

Received subscription money for 3d volume.—ED.

Best age to go to bull, or calve, we hold,
Begins at four, and ends at ten years old.

MAY.

Over Production of Cotton.

MESSRS. EDITORS—We have been told again and again, that the consumption is outrunning the production of cotton. To the uninitiated this would appear simply absurd—that there should be more consumed than is made. But the case is made out plainly enough: The stock on hand (mostly in Liverpool) several years ago, was nearly a million of bales—at present it is about half that number: of course, in some half dozen years, as the stock is diminished, the consumption must have exceeded the production. From this fact many have asserted that there has been no over production, and look to other causes for the fluctuations and depressions of the cotton market, and look to other remedies than the curtailment of the crop. All this is plausible reasoning—but at the same time I am convinced, very erroneous—and in its consequences, very mischievous. So long as low prices are attributed to other causes than over-production, so long will over-production continue. Low prices stimulate consumption—high prices restrain it. How much would consumption be increased, if cotton were three cents a pound? I think it is probable it would be doubled—and yet at that price the stock on hand might not, and probably would not increase. Why should it? It would supersede hemp and flax entirely, and to a great extent, even wool, hair and feathers—may, the belligerent powers of the world would then use it to make forts.—And could we then, because the stock did not accumulate, assert there was no over-production—that consumption kept pace with production? Surely no one would say so—all would agree that the thing was overdone, and that the remedy would be a curtailment of the crop. There could be no other remedy. All experience has shown that when corn or any other grain is superabundant, prices are low; and so of every commodity, not even excepting money, which cotton most resembles. Cotton then is certainly subject to this law, and the only question is how much can be raised and sold without sinking it below a remunerating price. My limits do not permit me to examine this question, it has so many ramifications—nor do I consider it material, as no prescribed crop could be produced where so many, without concert, are engaged in the production. No rule could be given, no concert with that object in view could succeed. It is plainly impracticable. Cotton must still remain subject to the laws that govern all cases of supply and demand. These are fixed and immutable laws—may, more, they belong to the "higher laws."

What then is to be done? This brings me to the object I had in view when I set out. We cannot dictate—we cannot prescribe—we cannot govern the prices of cotton; but we can, in a great degree, render ourselves independent of its fluctuations. We can take a position beyond or above their reach—we can make our necessities—all that is necessary to our comfort, at home. This is no far-fetched remedy—perhaps it is no hidden, but a plain truth; yet, judging our cotton planters by their conduct, it would seem they had not discovered it, or at least that

with them it was a mere theory, which they have not yet learned to put into practice.

It may be useless iteration—I fear it is so; but again I say it is over production that depresses the price of cotton: and at the risk of being tedious, I will press this view: Experience has proven that our short crops have sold for more money than our large ones—that a crop of two millions has actually sold for more than one of of two millions and a half. These are stubborn facts, and even the Macon convention could not get around them. They could not undertake to regulate the price of cotton. It would have been easier to regulate the amount of its production; but they would not even undertake that. I do not deny that there are other disturbing causes—speculation, monetary pressures, &c.: but these again are subject to the “higher law,” at least they are beyond our control. Hemmed in every direction in which he seeks escape, what is the cotton planter to do? Is he ever to be the sport of these ever swelling and sinking waves of high and low prices, which toss us like the ship in the storm described by Erasmus—“As oft as we were lifted up on high, one might have touched the moon with the finger—as oft as we were let down, we seemed to go directly into hell, the earth gaping.” The cotton grower who furnishes the clothing—more than that, the principal medium of exchange for the commercial world, derives the least profit from his labors.

“Sic, sed non pro se, lanigeritis oves

Sic, sed non pro se, aratris boves.”

This is a sad picture: does he wear willing chains, and can he not help himself? If it is his inevitable destiny then he must submit. It becomes the agriculturist above all men, to submit to the wise behests of an over-ruling Providence. But is it unavoidably his destiny? I think not. He may, if he will, work out his own deliverance. To do so, he has only to make a solemn and decided declaration of HOME INDEPENDENCE. Let him make all his necessities at home: let him grow his own grain—or as Dr. Phillips expresses it—“Less cotton, more grain:” let him raise his own mules, hogs and cattle, and his own wool—tan his own leather and make his own shoes. Let him go further—let him manufacture his own iron, and make his own tools: let him, instead of enlarging his cotton-fields, lay out his surplus capital in manufactories of yarn and coarse cotton goods, and let him be his own carrier; carry on a DIRECT TRADE with Europe, and the rest of the world. Let him do these things or encourage by his preference, those of his neighbors who undertake to do them. And after he has done all this, *let him grow as much cotton as he can—and my word for it he will obtain remunerating prices.*

LAURENS.

A HINT TO BLACKSMITHS:—The cutting of bars of iron or pipes with the chisel, is a laborious and tardy process. By the following mode the same end is attained more speedily, easily and neatly: Bring the iron to a white heat, and then fixing it in a vice apply the common saw, which, without being turned in the edge, or injured in any respect, will divide it as easily as if it were a carrot!

Agricultural Chemistry.

THERE is probably no department of science which has had more attention bestowed upon it of late years, than that of chemistry, as connected with agriculture, or more properly with organised matter.

Much that is valuable is the result of the unwaried exertions of many who have bestowed their time and attention to this subject; but in the meantime, perhaps, it may not be out of place to caution the tillers of the soil not to expect too much from the investigations of agricultural chemists.

It not unfrequently occurs, that in the pursuit of experiments we are led away from instead of towards the object we started to obtain. May not such be the case now with the labors of our agricultural chemists. To me it appears quite evident, too much dependance is placed upon the results of the analyses of vegetables. Many are led to suppose from the tables of analyses of various vegetables that are exhibited to us through the medium of agricultural books and papers, that all that is necessary for them to do to more successfully cultivate them, is, to present the substances found in the process of analyses to the use of the plant they are cultivating in some form and manner or other; and should they not meet with the success their enthusiasm had led them to expect, they are entirely at a loss for the failure. Few have taken into account the effect of the principle of life and vitality, which incessantly acts upon the solids and fluids. There are phenomena which chemistry never can solve, by merely attending to the invariable laws which govern inorganic substances.

None of the organic substances are governed by internal force or power, but are subjected to the direct action of foreign substances, independent of any modification from vital principle. The air, water and fire, produce in them effects which are constant, and subject to calculation.

It is not so with living bodies. To be sure they are all subject to the influence of external bodies—but the effect of these is frequently changed or modified, by the operation of the principle of life. We should, as chemists, look more to the results in connection with and in the vegetable whilst living, and less in the laboratory. We may ascertain the elements, or component parts of vegetables, by the process of analyses—but their effects and transportations can only be known by attentive study of the living body. In the

kingdom of organic chemistry, chemistry proper becomes subject and subordinate to, the laws of living bodies. Chemistry can detect what operates injuriously upon organized bodies,—observation, almost alone, what is acceptable to them. Whenever we destroy the principle of vitality in an organized being, the result is spontaneous decomposition—when with the presence of this mysterious agent a few moments before, order and durability were the result.

Our finding various substances in the analyses of vegetables, is not proof positive that they existed, in that state in the living body, or that they were taken up as aliment in that form; for it has been ascertained that the chyle of a gramivorous animal does not differ from that of a carnivorous.—Both afford a large portion of nitrogen, whilst one feeds on substances containing little or none. Brande found no difference in the chyle of a dog, whether fed entirely upon flesh or bread—whilst one of the substances abounds in nitrogen, and the other contains none. Phenomena of like character, occur in the venous circulation of blood. We find it dingy and charged with carbon, and anon it becomes purified and the carbon, expelled in form of carbonic acid. By what process the carbon becomes converted to carbonic acid, we are unable to determine. I could thus go on and give one substance after another of phenomena, which are unknown to the laws of chemistry.

We know not in what form the food or papulum of plants is in, when taken up by them or what modifications it undergoes in assimilation, or what compounds are formed through the instrumentality of the vital principle. We are in the habit of pronouncing certain substances as simple or primitive, because we cannot analyse them, when we can find them occurring and produced in organized bodies, and produced from substances which previously contained none. Nitrogen and some of its compounds, are given as examples and which appear to act more energetically upon the growth of vegetables than any others. It would not be expecting too much in this age of discovery, to prophecy that it would probably be soon ascertained that the food of plants consisted of a combination of nitrogen with carbon in some form yet unknown. Nitrogen is supposed by some chemists to be a compound itself: if so, may not its elements combine with carbon, and thus form the alimentary substance consumed by them. Chemists and naturalists must turn more of their attention to

the various phenomena, as connected with the living plants, rather than to the now almost all engrossing method of analyzing earth, manures, and the destructive process with plants. An experiment of the following character, would prove a very interesting one, and one that might be of essential service in establishing some knowledge of what plants do consume from the soil, in the process of growth.

Take two pots of earth of the same kind and quantity,—in one, plant some large and rapid growing plants—in the other, plant nothing—let both be placed side by side where they could receive the benefit of rain, sun, &c., just alike,—after the plant has arrived at maturity, analyze the earth in each pot and ascertain the difference. By this process we shall be able to learn what substances are essential to the growth of the plant which had been grown in it, with some degree of certainty.

As yet very little is known with certainty, in relation to the food of vegetables. Agricultural chemists do not even agree as to the situation of the mouths of plants, if I may use the term: some maintain it is in the top—whilst others assert it is in the root.—A very wide difference, surely. If they are unable to determine where such an important organ or organs are situated, very little reliance we should think, should be placed upon their opinions of the food they consume. I therefore hope some of our truly scientific men will turn their attention to this subject, in a manner that at least gives promise of benefit to the agriculturist.

J. VAN BUREN.

Rotation in Crops.

The Southern Recorder says, "many of the oldest counties of Georgia are now making more by agriculture, than when the lands were fresh and unworn." The Rural New Yorker says, "the first wheat crop raised in Western New York was sown in November, 1788. It produced 15 bushels per acre.—the same land has since frequently yielded harvests of 30 and 40 bushels per acre." Prof. Johnston says, "In 1780 the Island of Great Britain contained about 9 millions of inhabitants, it now contains about 20 millions. The land has not increased in quantity, but the consumption of food has probably more than doubled. The importation from abroad has not increased to any important extent; by improved management, therefore, the same area of land has been caused to yield a double produce." I make these quotations, Mr. Editor, to show what may be done in the way of improving lands. Many of your readers are no doubt hard of belief, and may not even be convinced by

such facts as the above. But to proceed, my subject for the present is the *rotation of crops best suited to our condition*. It was here I left off last winter and I wish I had not promised to continue the subject. Possibly, however, what I have to say may draw somebody's attention, and do some good. Nothing that relates to practical farming is so little understood in this part of the world. I stated in my 6th number that the same plant should not, as a general rule, be planted in the same field too often, and that there were some plants that ought not to follow each other, because they both required the same food or materials for support, and would consequently exhaust the soil of those materials, and, sooner or later, fail to find nourishment in that soil. That there were other plants that ought to succeed each other, because they do not take the same materials from the soil, and sometimes, when left on the soil to decay, even become food to each other. Having done so before, I cannot here go more fully into this part of the subject. My business now is to propose some practical course of rotation of crops. The common practice, hereabout is to alternate corn with small grain, and most of our farmers think if they do this they favor their land as much as they can. This is better than to go wholly on corn and wholly on small grain; but it is not a course that will improve, or even preserve, unimpaired, the fertility of our lands. These plants are nearly alike in their composition, and consume nearly the same materials in the soil. All our experience proves that our lands will "wear out" under this course; where, as it is shown above, in England, under a proper rotation, they have doubled their production in 50 years. We want, then, some course that, while it gives us good crops, will improve our lands. This is no idle speculation, it is what we must come to before a great while, or our fields will become barren wastes. But we cannot adopt the English course—she raises neither corn nor cotton—her course may be said to be settled already by experience. I am afraid we are as far from it as ever. We have got, if possible, to find a course that will admit cotton into the rotation without wearing out our lands. I do not pretend to be able to lay down such a course, I only mean to offer such suggestions as seem most likely to lead to it. It is a most important subject. *Will no one enter your columns to assist me? Nous verrons.*

Another rotation adopted by many is, 1. cotton, 2. corn, 3. small grain. This is liable to the same objections in a greater degree—it will certainly soon wear out our lands—but this course has many advantages in the case of cultivation, and might be so improved as, possibly, to answer our purposes. If the cotton crop were always to be manured at the beginning of each course, and the land rested at the end of the course, (the 4th year) taking due care to prevent washing, by ditches, &c., it is probable that its fertility would be preserved, and even increased, if the manure be rich enough and laid down in sufficient quantity. Such is pret-

ty nearly the plan of Dr. Cloud, of Alabama, and such he maintains is the true plan. But "it cannot be done," a hundred planters exclaim at once, "nobody can manure all their cotton land." To this I can only reply, Dr. Cloud says he does. It is true he plants but some 5 acres each, of cotton and corn, to the hand but he claims to have raised as much as 500 lbs. of cotton to the acre. Dr. Cloud lives in Alabama—we may not be able to equal that, but even here, in Laurens, 2300 lbs. to the acre has been raised by manuring highly, as the records of the Milton Agricultural society will show. Suppose, then, we can make 1000 or 1500 lbs. by this course, to the acre, over our whole crop of 5 acres to the hand, will it not be as profitable as 300 or even 600 lbs. per acre, off of 8 or 10 acres to the hand? Besides, in the one, our lands will be improving, in the other, wearing out rapidly.

But there are other rotations which we could adopt, and it may be, better ones; for instance, 1. cotton, 2. corn, with peas, 3. small grain with clover and plaster—the clover to be turned in. We have it on the high authority of Mr. Adcock, of Mississippi, that with plaster of Paris, clover will do as well in the South as it does in the North; without plaster he says it cannot stand our summers—it will burn up. With plaster it will keep green even in dry weather. He put on $\frac{1}{2}$ bushel to the acre—(see Patent Office Report, 1849-'50, page 162.) You would do well, Mr. Editor, to republish what he says there on this subject. Here, then, we can have a rotation embracing both the pea, the clover of the South, and the veritable red clover itself, the great fertilizer of the North. I could name other rotations, but this must suffice. If Mr. Adcock be right, we want no other. With our compost heaps, peas and clover, our exhausted fields may be made to luxuriate and blossom like the rose. I have now finished what I had to say on "deep plowing, manuring and rotation of crops." —*Laurensville Herald.* FRANKLIN.

Protecting Tender Roses.

After trying various modes of sheltering tender roses during winter, including the use of moss, inverted turf, straw, tan-bark covered with boards, &c., none appears to be equal, says the Albany Cultivator, to a covering with the branches of evergreens. Plants but slightly tender need but very little shielding in this way; while those the most susceptible of injury should be encased several inches thick. One eminent advantage which this treatment possesses, is the entire freedom from decay in the bark and stems of the shielded plants, which sometimes results from other modes. Pine, hemlock, white cedar, &c., may be used for this purpose. Where evergreen hedges or screens have been planted, the shearings or clippings may be employed with great convenience.

DURABILITY OF CYPRESS.—The gates of Constantinople, made of this wood, stood from the time of Constantine, to that of Pope Eugene IV, a period of 1100 years.

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DECOMPOSITION OF TAN.—A subscriber at Orange C. H., Virginia, asks us how he should manage spent tan to render it useful as manure. Tan is, at all times, slow of decomposition; but it may be reduced either by mixing it with lime, or with stable and barn-yard manure. If by the first, on every cart load of tan he should spread five bushels of lime, form his heap in this proportion, cover the top with a few inches of earth, and let it lie twelve months, then shovel it over, when it will be sufficiently rotted to apply to his lands. If by stable and barn yard manure, he should form a compost, layer and layer about, 2 parts tan, and 1 part manure, cover the top with earth, and let it lie a few months, occasionally turning it over to let in the atmosphere and excite fermentation. In either case, a bushel or two of salt and plaster would be of service if added to every 20 loads of the compost. When reduced, tan is an excellent manure. If obtainable, *unslaked* ashes, would answer better than lime, used in about the same proportion.

PEA VINES FOR MILCH COWS.—Mr. J. Q. Hewlett, of this city, informs us that he took his cows off of an excellent clover field, and put them to feed on the vines of the black pea, the result of which was, that the first week the product of the butter was increased from 16 to 21 lbs. and the second week a still further improvement from 21 to 24 lbs.

SCHOOL NOTICE.

THE MALE ACADEMY of this place will be opened on the first Monday in January next, under the care of Mr. WILLIAM R. JONES, who is a graduate of the South Carolina College. Mr. JONES has had some experience in teaching, and is recommended by the Faculty.

The **FEMALE ACADEMY**, will also open again on the same day, under the charge of Miss E. H. JEBB, who has taught there for the last year, and is known to the community.

F. W. SYMMES, Sec'y.

Pendleton, Dec. 13, 1851. 12-c



STRAWBERRIES.

20,000 HOVEY'S SEEDLING.—This fine Strawberry has been grown here for ten years with great success, and promise to be the best Strawberry for our climate. For sale at \$1 per hundred. WM. SUMMER, P. M. Pomaria, S. C., 1851. 12-c

GRASS SEED FOR SALE.

WE have some **HERDS GRASS**, **ORCHARD GRASS**, and **CLOVER** seed which, by request, have been ordered for the accommodation of our subscribers. Apply at this office.

Land for Sale in Pickens District.

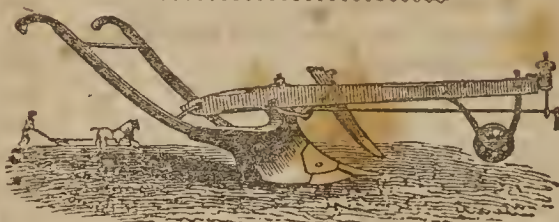
 THE Subscriber offers for Sale  the Tract of Land on which he now resides, lying in the fork of Seneca and Tugaloo rivers, on the main road from Pendleton to Carnsville, and twelve miles from the former place, containing nine hundred (900) acres; about one hundred (100) of which is Beaver-dam Bottom. The place has on it a large and

comfortable Dwelling House, a good Kitchen, and all other necessary out buildings. The site is a beautiful one, the water fine, and the place as healthy as any in the District. To a purchaser the crop now growing on the place will be sold, if desired, on the most favorable terms.

I. G. GAMBRELL.

Pendleton, S. C., Aug. 13, 1851.

WHITMAN'S AGRICULTURAL WAREHOUSE, BALTIMORE, MD.



THE UNPRECEDENTED and INCREASING INTEREST manifested in AGRICULTURE, and the liberal encouragement which has been given the subscriber, has induced him to engage in the **MANUFACTURING** business on an **EXTENSIVE SCALE**. His Factory and Warehouse is now the largest in Baltimore, and probably the most extensive in this country.

His stock for 1851 will consist in part of: 10,000 **PLOUGHS** embracing his **PREMIUM PLOUGHS**, and nearly every variety in use from Maine to California. 600 **WHITMAN'S PREMIUM CULTIVATORS**, at \$4, \$5 and \$6 each.

150 **HARROWS**, at 6, 7, 8, 9, 10, 11 and \$12 each.

500 **PREMIUM STRAW, HAY and CORN-STALK CUTTERS**, at 10, 12, 17, 23, 28 and \$37 each.

100 **PREMIUM CORN and COB CRUSHERS**, (the best in use) at \$50.

2000 **WHITMAN'S PREMIUM CORN-SHELLERS**, at 10, 16 and \$18.

2000 **PREMIUM WHEAT FANS**, GRANT'S and BAMBOROUGH'S (which cannot be equalled) at 25, 28, 30, 32; and \$35.

100 **SWEEP POWERS** of the most improved plans—Price 90 to \$120.

100 **ONE WHEEL or EDDY POWERS**, enlarged and improved.—Price \$100.

300 **WHITMAN'S PREMIUM THRESHERS** the cylinder of which we will warrant to last 100 YEARS, in constant use. This machine breaks less grain and threshes cleaner and faster than any other machine in use.—Price 45 and \$50. Additional price for **STRAW CARRIERS**, \$15.

100 **WHEAT DRILLS** which are perfect in their operation, and save enough in the seeding of fifty acres to pay the cost of the Drill.—Price \$100.

100 **WROUGHT IRON RAILWAY HORSEPOWERS** which received the **FIRST PREMIUM** at the Maryland State Fair in 1849 and 1850.—Price \$100

100 **CORN-PLANTERS**, a great labor-saving implement.—Price \$20

REAPING MACHINES, the best in use, price \$125.

100 **PREMIUM FODDER CUTTERS and GRINDERS**, at 30, 35, and \$60.

50 **FIELD ROLLERS**, which received

the **FIRST PREMIUM** at the State Fair, at 30, 40 and \$50.

BURR STONE CORN MILLS—Price \$90 to 120.

A large stock of *Chain and Suction Pumps, Water Rams, Ox-Yokes, Root-Pullers, Sausage-meat Cutters and Stuffers, Cow-Milkers, Churns, Post-hole Augurs, Agricultural Furnaces, Hoes, Rakes, Shovels, Spades, Garden and Horticultural Tools*, and every description of Farm Implements found in this country.

—ALSO—

FIELD and GARDEN SEEDS of every variety.

FRUIT and ORNAMENTAL TREES.

GUANO, and all the various kinds of **FERTILIZERS** in use, all of which will be sold at **WHOLESALE and RETAIL** as low as can be had in the United States, the quality considered.

A *Catalogue* of 120 pages, containing a description of our *Implements and Machinery*, will be forwarded gratis, if applied for by mail post paid—and all orders accompanied with *cash or satisfactory references*, will meet with prompt attention.

EZRA WHITMAN, JR.

corner of Light and Pratt Sts.,

BALTIMORE, MD.

January 1, 1851.

THE SPANIARD.

THIS magnificent **SPANISH JACK-ASS**, who has just made his entrance into America, will, as soon as he recovers from the effects of a long voyage, be ready for the work of procreation. He will have but one Station, and that at my Plantation, on Seneca River, Four Miles North-west of Pendleton Village.

An opportunity of rare occurrence is now offered the country, for the propagation of a splendid stock of Mules, whose superiority for agricultural purposes, will be admitted by all who have given them a fair trial.

In relation to this excellent **JACK**, suffice it to say,—he cost a great deal of money,—and for size form and action, was one among five of the best that could be procured in Spain by a special agent.

Pre-engagements should be made by all those who are anxious to put to him in the Fall, as his number will be limited to a few.

He will be let to a few Mares during his recovery this Summer.

TERMS.

Twelve dollars Insurance for Mares.

Twenty-five dollars Insurance for Jennets.

J. W. CRAWFORD.

Cold Spring, July, 1851. 8-1f

SUB-SOIL PLOUGHS.



THE undersigned is Agent for the sale of Dr. BROYLES' **CELEBRATED SUBSOIL PLOUGH**, the utility of which it is unnecessary here to mention, as its superiority over any other similar kind is proverbial.

A. M. BENSON.

Commission Merchant.

Hamburg, S. C., July, 1851. 7-1f